LEGACY
PARKWAY & PRESERVE

Denver & Rio Grande Corridor Evaluation

in support of the
Supplemental Environmental Impact Statement

Legacy Parkway
Technical Memorandum

December 2004

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1.0 Introduction

In September 2002, the U.S. Court of Appeals for the 10th Circuit issued its ruling in *Utahns for Better Transportation v. U.S. Department of Transportation* concerning the Legacy Parkway project. The Final Environmental Impact Statement (EIS) for the project had eliminated a regional highway corridor that followed the Denver & Rio Grande Railroad (D&RG) tracks. The Court's 2002 ruling found that the Final EIS was inadequate because it had eliminated the D&RG corridor based on unverified cost estimates (U.S. Court of Appeals 2002, 71). Moreover, the Court found that the U.S. Army Corps of Engineers (USACE) issued a Section 404(b) permit without enough information to determine whether the D&RG corridor was a practicable alternative under the Clean Water Act (U.S. Court of Appeals 2002, 72).

In addition—although the following two findings were not directed specifically at the elimination of the D&RG corridor—the Court found that the USACE acted arbitrarily and capriciously for failing to consider whether a narrower median was a practicable alternative and for failing to consider whether a right-of-way (ROW) without a future utility corridor or berm was practicable[1] (U.S. Court of Appeals 2002, 72).

At various times, the railroad corridors in the Legacy Parkway project area (the D&RG and Union Pacific Railroad) have been suggested for use as a roadway alignment to meet the transportation needs in the North Corridor. Proponents felt that such a roadway alignment would take advantage of the linear, underused railroad right-of-way.

In 1998, the Wasatch Front Regional Council (WFRC) completed the *Western Transportation Corridor Major Investment Study* (WFRC 1998), which considered, evaluated, and rejected a highway alignment using a portion of the D&RG corridor. In 2000, the D&RG regional corridor was analyzed in the Legacy Parkway Final EIS and was again found to be unreasonable.

Because of the Court's decision, the D&RG regional corridor from the Final EIS has been reconsidered in greater detail with particular attention to the limited deficiencies that the Court identified in the Final EIS administrative record. The following sections contain the results of the re-evaluation and, as a part of the Supplemental EIS, information has been updated where changes have occurred

[1] Even though this issue was raised for the reasonable alternatives only, because of the Court's questions regarding necessary and appropriate right-of-way, the lead agencies have directed the Utah Department of Transportation to re-examine the right-of-way needed on all alignments that were considered in the Final EIS. For more information, see the Legacy Parkway Technical Memorandum: Right-of-Way Issues (HDR 2004).

(including cost information for the other regional alignments considered in the Final EIS).

1.1 Court Ruling

The U.S. Court of Appeals for the 10th Circuit found that the elimination of the D&RG regional corridor in the Final EIS was based on insufficient information under both NEPA and the Clean Water Act. This section provides an overview of the Court's ruling and identifies the specific deficiencies found by the Court under NEPA and the Clean Water Act that will be addressed.

Deficiencies under NEPA. Regarding NEPA, the Court found the following deficiencies pertaining to the D&RG alignment:

- The lead agencies failed to follow their own regulations by not verifying the cost estimates used to eliminate the D&RG regional corridor and select the Great Salt Lake regional corridor[2] (U.S. Court of Appeals 2002, 14).

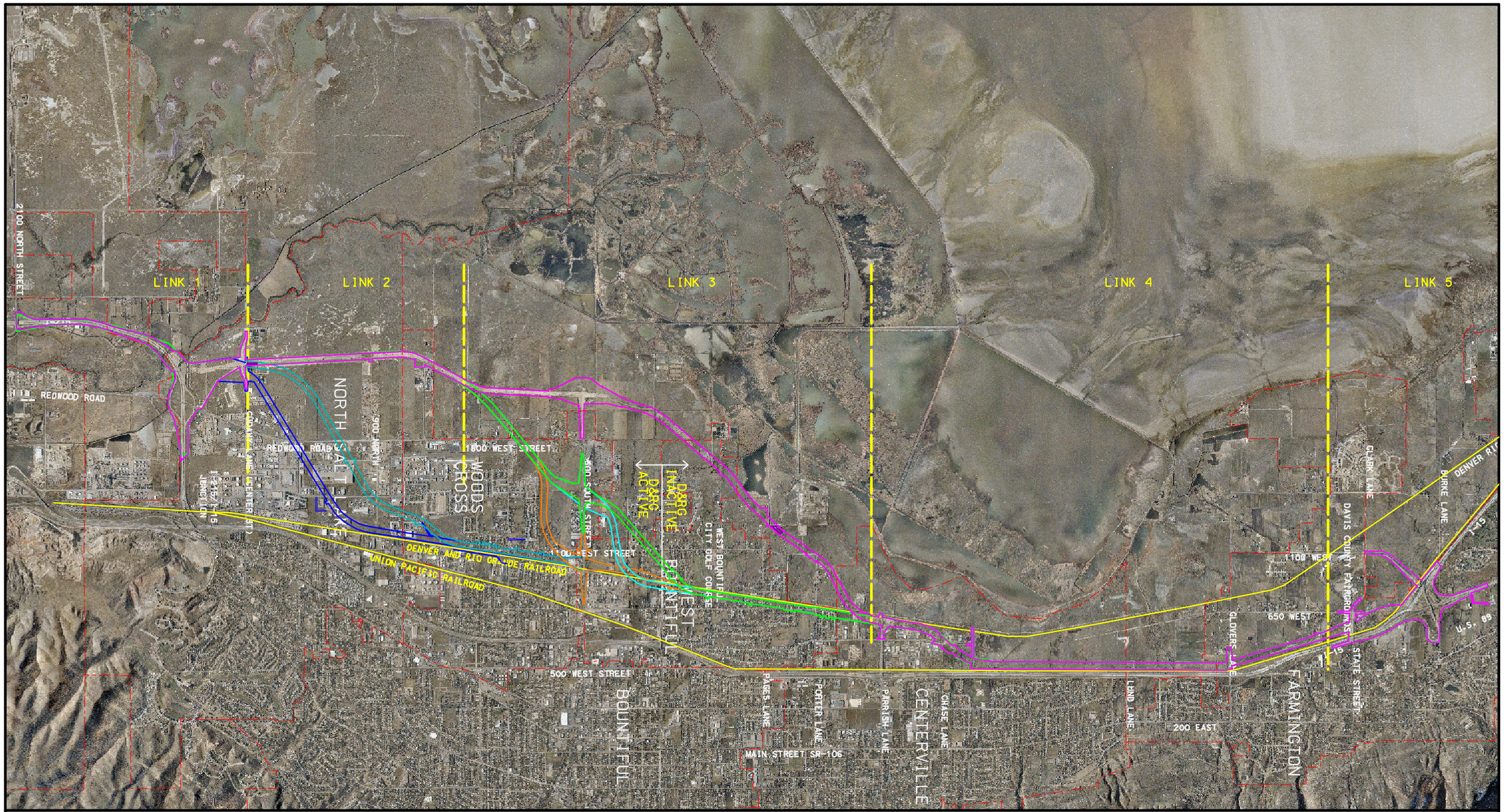
In response, the lead agencies directed the Utah Department of Transportation (UDOT) to update the cost estimates and document the cost-estimating methodology for all five regional corridors. The cost estimates and methodology documentation were then reviewed by lead agency staff, their independent consultants, and the cooperating agencies. To calculate the cost estimates, the Legacy Parkway project team re-examined the necessary right-of-way relative to the project's purpose and need, design standards from UDOT and the Federal Highway Administration (FHWA), and safety considerations. For more information, see the *Legacy Parkway Technical Memorandum: Right-of-Way Issues* (HDR 2004).

Deficiencies under the Clean Water Act. Regarding the Clean Water Act, the Court found the following deficiencies pertaining to the D&RG regional corridor:

- Similar to the deficiency identified regarding NEPA, the Court found that the USACE violated its own regulations by failing to verify the cost estimates provided by UDOT (U.S. Court of Appeals 2002, 60).
- The USACE's issuance of the Section 404 permit was deemed arbitrary and capricious because the evidence did not adequately address the impact on existing development.

[2] Even though this issue was raised for the D&RG regional corridor only, UDOT updated the information for all five regional corridors discussed in the Final EIS.

In response, the lead agencies conducted a thorough review of all information concerning the D&RG and railroad corridors. This review focused on the D&RG corridor. Since publication of the Final EIS, the Union Pacific Railroad corridor has been purchased by the Utah Transit Authority (UTA) for commuter rail. As part of this review, the lead agencies directed UDOT to further refine the D&RG regional corridor by identifying the right-of-way necessary to safely meet the transportation needs in the North Corridor and to create conceptual highway alignments within the D&RG regional corridor (see Figure 1-1, D&RG Conceptual Alignments). The intent of this analysis is to update the cost estimates, to document the cost-estimating methodology, and to quantify impacts.



LEGEND

- DRG1
- DRG2
- DRG3
- DRG4
- DRG5
- ALT E
- LINK DESIGNATION
- RAILROAD
- JURISDICTIONAL BOUNDARIES

0 1 2
KILOMETERS

0 0.5 1
MILES

W S N E

FIGURE 1-1

D&RG CONCEPTUAL ALIGNMENTS

LEGACY PARKWAY SUPPLEMENTAL EIS

1.2 Previous Analysis

This section summarizes previous efforts to evaluate a roadway along the D&RG right-of-way. This information is included to provide a historical context for the evaluation prior to the Supplemental EIS. As mentioned in Section 1.0, Introduction, two previous analyses were conducted for a roadway running along the D&RG tracks: one during the Major Investment Study and one during the EIS phase of the Legacy Parkway project. In both cases, a roadway along the D&RG was rejected.

1.2.1 Major Investment Study Analysis

In 1998, transportation alternatives were evaluated as part of the *Western Transportation Corridor Major Investment Study* (MIS) conducted by the WFRC, the metropolitan planning organization with jurisdiction over the area (WFRC 1998). Major Investment Studies were promoted by the 1991 Intermodal Surface Transportation Efficiency Act (ISTEA) to provide a focused analysis and evaluation of the mobility needs and related problems of a corridor or subarea within a region. One of the intents of an MIS is to streamline the decision-making process by creating continuity between the evaluations and decisions made during early regional planning and those made during the project-specific environmental review. Following the intent of the MIS process, UDOT built on the evaluation and recommendations from the 1998 MIS in pursuing the Legacy Parkway project.

During the MIS process, conceptual transportation solutions were identified and developed through public involvement and a search of local transportation plans. Viable alternatives were intended to satisfy the following conditions (WFRC 1998):

- Address the mobility problems in the study area and the purpose of and need for the project;
- Provide a match of the capacity of the proposed transportation improvement with the projected area travel demand;
- Have minimal or no major operational flaws;
- Have minimal or no major environmental impacts; and
- Balance costs with expected benefits.

MIS Alternatives

As part of the MIS, rail and roadway facilities were considered on more than a dozen alignments. Roadway facilities included collectors, arterials, parkways, expressways, and freeways (all of which included pedestrian and bicycle facilities) on rights-of-way between 60 and 90 m (200 and 300 ft) in width. Rail facilities included light rail, commuter rail, and freight rail. Transportation system management and a no-build alternative were also studied. Roadway alignments that approximated both the D&RG and the Great Salt Lake regional corridors were examined.[3]

As studied during the MIS, the D&RG roadway alignment would have begun at the interchange of Interstate 215 (I-215) and Interstate 80 (I-80), followed Redwood Road north, extended northeast to the D&RG right-of-way in Centerville, traversed along the D&RG right-of-way to the city of Roy, and then extended north to 12th Street in Weber County (WFRC 1998, 2-14).

The southern component of the MIS alternative that was titled the "West Roadway Alternative" approximates the Legacy Parkway alternative alignments studied in the Final EIS. Under this MIS alternative, a new parkway or freeway facility would be constructed starting at the 5600 West/I-80 interchange, traverse west of the power lines through Woods Cross, traverse west of and parallel to the D&RG right-of-way in Centerville, cross west of the power lines to Bluff Road, continue northwest, follow 4500 West in Davis County, then follow 5100 West in Weber County through the west side of Plain City, connecting to I-15 at the Hot Springs interchange. This alignment would have included a connection to I-215 in the vicinity of Redwood Road (WFRC 1998, 2-15).

MIS Community Input

The planning process followed for the Western Transportation Corridor MIS was cooperative and collaborative. To direct the process, the WFRC (which included locally elected officials) and a senior official from UDOT formed a steering committee. A number of public meetings and other public involvement activities were used to gather input on the alternatives. These activities were also used to help shape, evaluate, and temper the decision to have an alternative move beyond the initial screenings for further analysis.

The sentiment of the public and agency comments received was that building a roadway along the D&RG would cause too many impacts and too much community disruption. This comment from Mayor Mitchel from the Clinton City

[3] In addition to the D&RG and Great Salt Lake corridors, the MIS examined alignments that approximated the Antelope Island, Trans-Bay, and Farmington Bay alignments later examined in the Final EIS.

Council reflects the most widely expressed sentiment: “The abandoned D&RG lines would be a bad option for our city. That right-of-way should be reserved for a commuter rail system. If the expressway were pursued at that location, it would split our community in half. A lot of land acquisition would be required, much of that where new homes have been constructed” (Clinton City Council Meeting 6/25/96).

MIS Alternatives Screening

To evaluate alternatives, a multilevel screening process was used. Level I screening applied a number of broad criteria to screen out alternatives with obvious major flaws. Two alternatives that crossed over open waters of the Great Salt Lake were eliminated because they did not meet the project need, had high construction and maintenance costs, had substantial impacts to wildlife preserves, and had extensive impacts to Antelope Island State Park.[4] The remaining alternatives (including the Great Salt Lake and D&RG regional alternatives) were analyzed in a second-level screening process that applied more detailed criteria. In the Level II screening, the alternatives were evaluated against the criteria in Table 1-1.

Table 1-1. Western Transportation Corridor MIS Level II Screening Criteria

Category	Criteria
Purpose of and Need for the Project	• Existing and future mobility needs • Improve safety and emergency response
Operating Efficiencies	• Ease of construction • Major operational flaws
Environmental Benefits	• Major physical environmental impacts • Major social and economic environmental impacts
Costs Balance with Benefits	• Typical cost • Typical usage

Source: WFRC 1998, 2-16

[4] The MIS analysis also rejected the Antelope Island and Trans-Bay alternatives in the Level I screening and the Farmington Bay alternative in the Level II screening (WFRC 1998, 2-11). These alternatives were reanalyzed and eliminated from detailed analysis in the Legacy Parkway Final EIS.

MIS Screening Results

The MIS screening analysis resulted in the D&RG roadway alternative's being eliminated for the following reasons (WFRC 1998, Table 2.2-2):

- "Substantial public opposition.
- Would require substantial displacements of residences.
- Does not provide a western alternative to I-15.
- It would eliminate a potential commuter rail corridor."

Through an extensive public and agency involvement process, a general consensus formed around a locally preferred alternative. The locally preferred alternative included constructing a roadway, preserving the D&RG corridor for a commuter rail line or trail, and increasing commuter bus service. The southern component of the locally preferred roadway alignment lies within the same corridor as the Legacy Parkway alternative alignments. The locally preferred alternative was endorsed by the Western Transportation Corridor Steering Committee, which was made up of locally elected officials and representatives from UDOT and FHWA, to be advanced within an EIS. This decision resulted in the Great Salt Lake regional corridor being the preferred location for a highway and subsequently the Legacy Parkway EIS process, which was used to select the Preferred Alternative.

1.2.2 Previous Final EIS Analysis

The section briefly summarizes the alternatives considered and rejected in the Final EIS. To meet the overall needs of the traveling public, Utah's state and local officials developed a multi-tiered approach called the Shared Solution. The Shared Solution includes improving and expanding I-15, augmenting existing arterial streets, adding transportation management strategies, enhancing mass transit, and constructing a new facility (the Legacy Parkway). UDOT initiated the EIS process to begin development of the Legacy Parkway in 1996.

As proposed in the Final EIS, the Legacy Parkway is essentially the southern component of the corridor studied in the MIS—between roughly 2100 North in North Salt Lake and the US 89/I-15 interchange in Farmington, subsequently termed the North Corridor. To build on the MIS, the Final EIS evaluated five "regional alignments" (which are really broad corridors) examined originally in the MIS (see Figure 1-2, Final EIS Regional Corridors).

Based on the MIS analysis and additional analysis and public involvement during the Final EIS, the federal agencies rejected four of the corridors as unreasonable and impracticable and selected one corridor (the Great Salt Lake corridor) as

reasonable. Within the Great Salt Lake corridor, UDOT developed four specific alignments and analyzed those alignments in detail during the EIS process.

Final EIS Regional Corridors

The Final EIS initially evaluated the following five regional corridors: Antelope Island, Trans-Bay, Railroad (either the D&RG Railroad or Union Pacific Railroad), Great Salt Lake, and Farmington Bay. Figure 1-2, Final EIS Regional Corridors, shows the five regional corridors. The following descriptions of the regional corridors are taken from the Final EIS (2-25):

Antelope Island. The Antelope Island alignment would consist of a causeway from north of I-80 at 5600 West in Salt Lake City to Antelope Island, a new highway the entire length of the island, and a causeway from Antelope Island to west of I-15 in the vicinity of Kaysville.

Trans-Bay. The Trans-Bay alignment would consist of a new highway connection from I-80 at 5600 West in Salt Lake City to Farmington Bay, a causeway or bridge across Farmington Bay, and a new highway to the connection with I-15 and US 89 near Farmington.

Railroad. This alignment would generally follow the D&RG or Union Pacific Railroad tracks and would parallel I-15 throughout the North Corridor. This alignment would follow I-80 eastward from 5600 West and I-215 northward to the western side of either railroad and would require construction of a new roadway from I-80 northward to I-15 and US 89 near Farmington.

Great Salt Lake (GSL). This alignment consists of a new highway generally situated between the developed areas west of I-15 and the floodplain of the Great Salt Lake. It runs from I-80 at 5600 West to the Farmington/Kaysville area, where it would connect to I-15 and US 89.

Farmington Bay. This alignment would be similar to the Great Salt Lake alignment, except that it would be farther west and cross Farmington Bay on a causeway or bridge between West Bountiful and Farmington before turning east to connect to I-15.

LEGEND

- Antelope Island Alignment
- Trans-Bay Alignment
- Farmington Bay Alignment
- Great Salt Lake Alignment
- Railroad Alignment
- Jurisdiction Boundary
- Secondary Road
- Major Road
- Rail

Source: Utah AGRC - 1997, HDR - 1999 File: /home2/projects/utah/westdavis/aml/b-chap2maps.aml Plotted: 12 Jun 00

0 1 2 3 4
Kilometers

0 0.5 1 1.5 2
Miles

W S N E

UDOT GOING THE EXTRA MILE

HDR HDR Engineering, Inc.

Figure 1-2.
Final EIS Regional Corridors.

Final EIS Community Input

The D&RG and other corridors were addressed in the public involvement and agency coordination process for the Legacy Parkway Final EIS. This process included the following public involvement activities:

- A Notice of Intent (NOI)
- Agency coordination meetings with the U.S. Environmental Protection Agency (EPA), USACE, and FHWA
- Six public meetings
- A public hearing/open house on October 28, 1998, to formally release the Draft EIS to the public, which nearly 700 people attended
- Project Advisory Committee (PAC) meetings
- City and county meetings
- Environmental Task Force meetings with members of the Friends of the Great Salt Lake; Future Moves ASSIST, Inc.; the Great Salt Lake Audubon Society; the League of Women Voters; the Sierra Club–Ogden Group; and the Sierra Club, Utah Chapter
- A Transportation Information Center, which nearly 200 people visited
- Project representation at eight transportation fairs in Davis and Salt Lake Counties
- Eight project newsletters and three public meeting reports to nearly 4,000 members of the project mailing list.
- A Web site that received 20,000 hits between November 1997 and November 1999

Final EIS Regional Corridor Screening

The Final EIS evaluated the five regional corridors based on costs, wetland impacts, and impacts to existing development. For this initial screening, the project team used a planning-level approach to the evaluation that assumed a 100-m (328-ft) development corridor within each regional corridor. In each case, the alternatives were assumed to include a four-lane freeway. Costs were based on a 100-m right-of-way and generalized bridge requirements (Final EIS, 2-26). Aerial photographs, wetland inventory maps, and land development maps were used to position each corridor and identify potential impacts.

Final EIS Screening Results

Table 1-2 presents the screening criteria and evaluation results used in the Final EIS to evaluate and select a regional corridor. This table can be found in the Final EIS as Table 2-10 on page 2-26.

Table 1-2. Results of the Regional Corridor Screening in the Final EIS

Regional Corridor	Estimated Cost (millions)	Impact on Wetlands	Impact on Existing Land Development
Antelope Island	$1,400	High	Low
Trans-Bay	$1,460	High	Low
Railroad			
Denver & Rio Grande	$460	Low	High
Union Pacific	$1,900	Low	High
Great Salt Lake	$300	Medium	Medium
Farmington Bay	$520	High	Low

Source: Final EIS, 2-26

Based on the analysis in the Final EIS, the federal agencies selected the Great Salt Lake regional corridor for detailed analysis because it balanced impacts on environmental resources (wetlands) with impacts on local communities and businesses (development) while having a reasonable estimated cost. The other corridors, including the D&RG, were eliminated from further consideration because of high environmental impacts (on either wetlands or development) and high costs.

After selecting the Great Salt Lake regional corridor, UDOT developed four specific alignment alternatives within the corridor for detailed study and presentation in the Final EIS. These alternatives were labeled Alternative A, Alternative B, Alternative C, and the Preferred Alternative.